

Tony McMullen
General Manager
Glenorchy City Council
PO Box 103
GLENORCHY TAS 7010

14 September 2020

**Representation – Draft Glenorchy LPS
11 Timsbury Road, Glenorchy**

All Urban Planning Pty Ltd has been engaged by the owner of 11 Timsbury Road, Mr Tim Wark from Hole in the Ground Investments Pty Ltd and makes representation in relation to the zoning of the land under the Draft Glenorchy LPS.

The site was disposed of by the Department of Education as surplus to their requirements.

The site is no longer in public/community ownership and the proposed Community Purpose zoning under the Draft LPS is not supported.

It is submitted that the site should be zoned Commercial along the Brooker Highway frontage of the site and Light Industrial to the south adjacent to the existing Industrial Zoned areas of Derwent Park. The division in zoning would logically occur either side of the formed access road to the Department of Education site at 456-458 Brooker Highway.

1. The Site

This representation relates to CT177859/2 at 11 Timsbury Road, Glenorchy. The site is in private ownership and intended for future private development. The lot is in two parts either side of an acquired road owned by the Crown. The road provides access to the Department of Education's staff training facility at 454 -458 Brooker Highway adjacent to the Goodwood Primary School.



Figure 1 – Location Plan

2. Consideration

The Draft LPS Zoning

The land is zoned Community Purpose under the draft LPS.

Existing Zoning under the Glenorchy Interim Planning Scheme 2015.

The site is zoned Community Purpose. Land in the surrounding area is zoned variously under the Planning Scheme as shown on Figure 2 below and includes General Industrial, Local Business, General Residential, Open Space, Utilities and Community Purpose. The Showgrounds are covered by a Specific Area Plan that has the effect of a commercial zoning over that land.

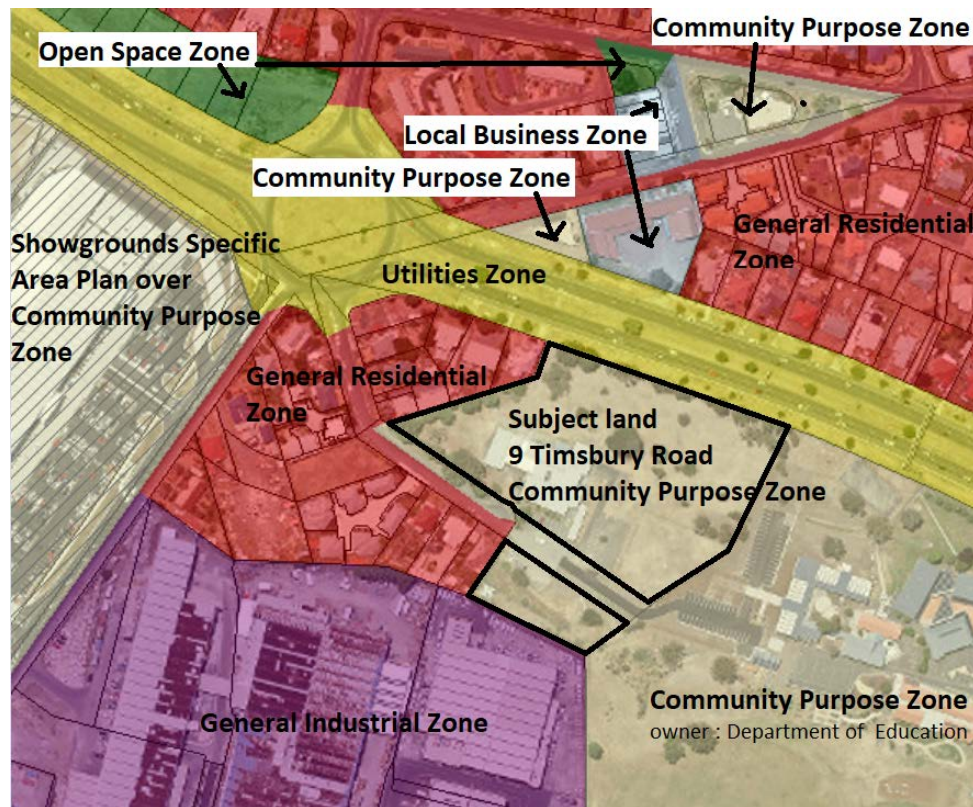


Figure 2 – Surrounding Zoning

Strategic considerations

The following points are relevant strategic considerations for the site and future zoning:

- The site was disposed of by the Department of Education, is not required for community use or facilities and is intended for future private development;
- The site has frontage to the Brooker Highway and has high visibility from passing traffic;
- The site is subject to potential amenity impacts from the highway traffic noise and the General Industrial zoned areas adjacent to the south;
- A teacher training center owned by the Department of Education adjoins the site to the south east;
- There are existing residential dwellings to the west;
- Traffic access to the site is via Timsbury Road from Howard Road opposite the entrance to the Bunnings Carpark;
- The site is within the Urban Growth Boundary and outside the Densification Area under Map 10 of the Southern Tasmania Regional Land Use Strategy; and
- The existing residential cluster around the junction of Brooker Highway and Howard Road is affected by traffic noise and adjacent General Industrial land and accordingly has reduced residential amenity.

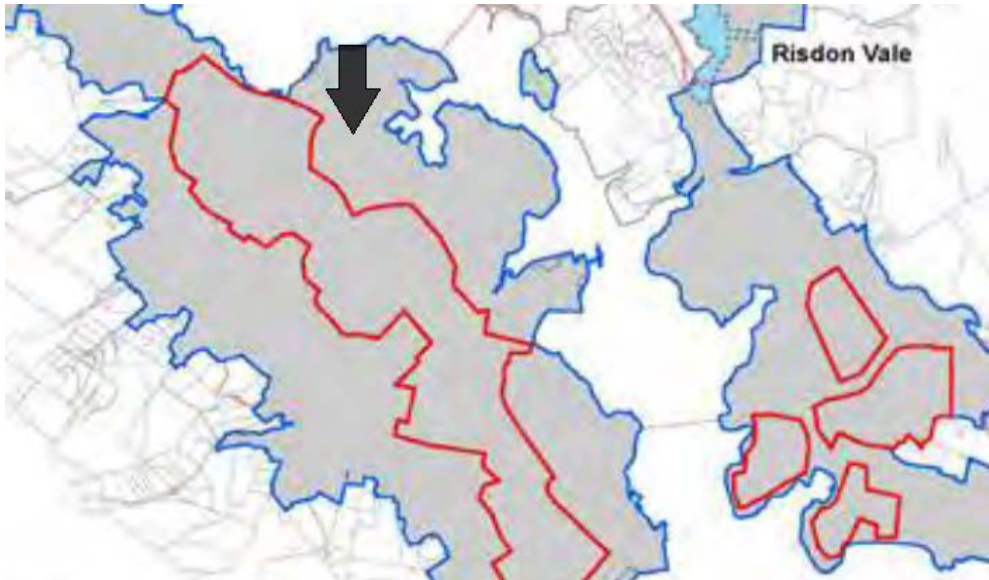


Figure 3 – Map 10 Southern Tasmania Regional Land Use Strategy

On the basis that there is no need to accommodate community uses or facilities on the site and as the site does not provide a high level of residential amenity, the owner wishes to develop the site for a light industrial/ commercial format.

There are a number of specific use options that are appropriate to the site circumstances such as a showroom/warehouse or open display yard that takes advantage of the high traffic visibility. One such concept layout is provided below in Figure 4.

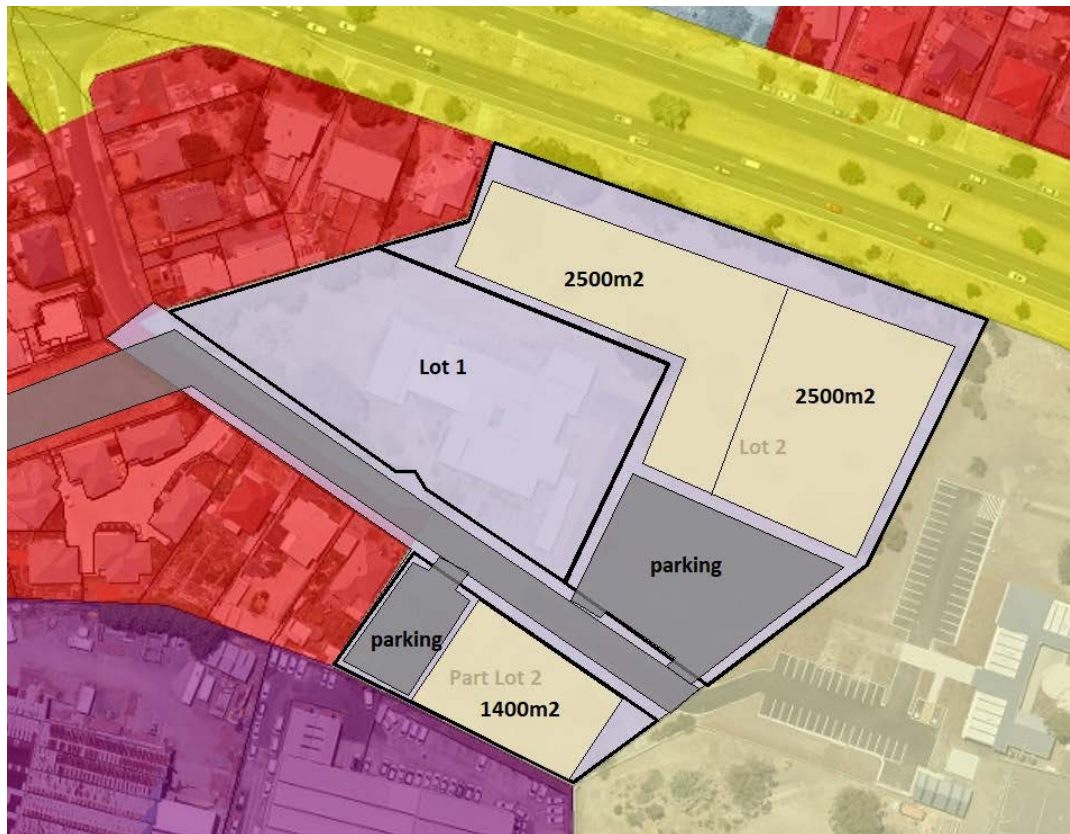


Figure 4– Potential site development option

Zone Options

The existing Community Purpose Zoning does not logically apply given the change to private ownership and that it is not required for the provision of community facilities.

There are 8 main options for zoning of the land:

1. Maintain Community Purpose Zoning
2. Change to General Industrial to match adjoining land to the south
3. Change to Light Industrial Zoning to transition between the General Industrial land to the south and General Residential areas adjacent to the west.
4. Change to General Residential Zone to match surrounding residential areas
5. Change to Commercial Zone
6. Change to Urban Mixed Use Zone
7. Change to Local Business Zone
8. A Particular Purpose Zone or Specific Area Plan Overlay.

I comment in relation to the suitability of each of these options in the following table with regard to the Section 8A Zone Application Guidelines for the Local Provisions Schedules of the Tasmanian Planning Scheme.

A combination of Options 3 and 5 are considered appropriate to the unique circumstances of this site.

Consideration of alternative zoning options

Option 1. Community Purpose Zone
<i>Zone Application Guidelines</i>
<p><i>CPZ 1 The Community Purpose Zone should be applied to land that provides, or is intended to provide, for key community facilities and services, including:</i></p> <ul style="list-style-type: none"> <i>(a) schools, tertiary institutions or other education facilities;</i> <i>(b) medical centres, hospital services or other care-based facilities;</i> <i>(c) emergency services facilities; or</i> <i>(d) large community halls, places of worship or other key community or cultural facilities.</i> <p><i>CPZ 2 Some community facilities and services may be zoned the same as the surrounding zone, such as a residential or business zone, if the zone is appropriate for the nature or scale of the intended use, such as a small scale place of worship, public hall, community centre or neighbourhood centre.</i></p> <p><i>Note: Major community facilities and services, such as tertiary educational facilities and hospital services, with unique characteristics may be more appropriately located within a Particular Purpose Zone.</i></p>
Comment on suitability
<p>The existing zoning is not a good fit for the subject land in that:</p> <ul style="list-style-type: none"> • The land is in private ownership and is not intended to provide for educational, medical or emergency facilities. • It is also not intended to provide for a large community hall, place of worship or for key community or cultural facilities. <p>It is noted that Council's supporting report for the LPS (pages 148-150) did not consider the circumstances of this land.</p>
Option 2. General Industrial
<i>Zone Application Guidelines</i>
<p><i>GIZ 1 The General Industrial Zone should be applied to land that provides, or is intended to provide, for a range of larger-scale or medium and higher impact, manufacturing,</i></p>

<p><i>processing, servicing, storage and transport and distribution uses. These are likely to include large industrial operations with actual or potential nearby off site impacts. These may be located in areas remote from land designated for other uses, such as residential use, in order to avoid land use conflicts.</i></p> <p><i>GIZ 2 The General Industrial Zone should not directly adjoin land zoned for residential purposes unless:</i></p> <p><i>(a) separated by physical buffers such as a major road; or</i></p> <p><i>(b) for existing industrial areas that provide for larger-scale or medium and higher impact, manufacturing, processing, servicing, storage and transport and distribution uses.</i></p> <p><i>GIZ 3 The General Industrial Zone should have access to freight transport routes and other utility infrastructure and services (e.g. electricity, water, sewerage) that is appropriate for the intended industrial use.</i></p> <p><i>GIZ 4 The General Industrial Zone may be applied to land without connection to a reticulated sewerage system if:</i></p> <p><i>(a) for existing industrial areas that provide for larger-scale or medium and higher impact, manufacturing, processing, servicing, storage and transport and distribution uses;</i></p> <p><i>(b) unnecessary for the intended industrial use; or</i></p> <p><i>(c) the area is capable of accommodating on-site waste water treatment systems suitable for the intended industrial use.</i></p> <p><i>GIZ 5 The General Industrial Zone may be applied to port and marine facilities that are directly linked to specific higher impact manufacturing, processing, repair, servicing or storage uses.</i></p> <p><i>GIZ 6 The General Industrial Zone may be applied to land seaward of the high water mark where it includes existing, or is intended for, industrial activities.</i></p>
<p>Comment on suitability</p>
<p>This zone is generally to be applied to existing industrial areas that do not directly adjoin residential areas. In this case the site is close to the residential properties to the west and has existing access via Timsbury Road through the cluster of residential properties around the junction of the Brooker Highway and Howard Road.</p> <p>An extension of the General Industrial Zone is problematic.</p>

Option 3. Light Industrial Zone

Zone Application Guidelines

LIZ 1 The Light Industrial Zone should be applied to land where there are likely to be minimal off site impacts.

LIZ 2 The Light Industrial Zone should not be applied to individual, isolated industrial uses, unless:

(a) they are a use, or are of a scale, that is more appropriate for the Light Industrial Zone and there is a strategic intention to maintain the use; or

(b) there is a strategic intention to expand the existing industrial area in this locality consistent with the relevant regional land use strategy, or supported by more detailed local strategic analysis consistent with the relevant regional land use strategy and endorsed by the relevant council.

LIZ 3 The Light Industrial Zone should not be applied to areas that primarily accommodate, or are strategically intended to accommodate, large-scale, medium or high impact manufacturing, processing, storage, or transport activities (see General Industrial Zone).

LIZ 4 The Light Industrial Zone may be applied to land seaward of the high water mark where it includes existing, or is intended for, light industrial activities.

Comment on Suitability

Light Industrial Zoning would be consistent with the existing pattern of zoning in the Derwent Park area where Light Industrial Zoning is applied to transition from General Industrial to General Residential areas as illustrated in Figure 5 below.

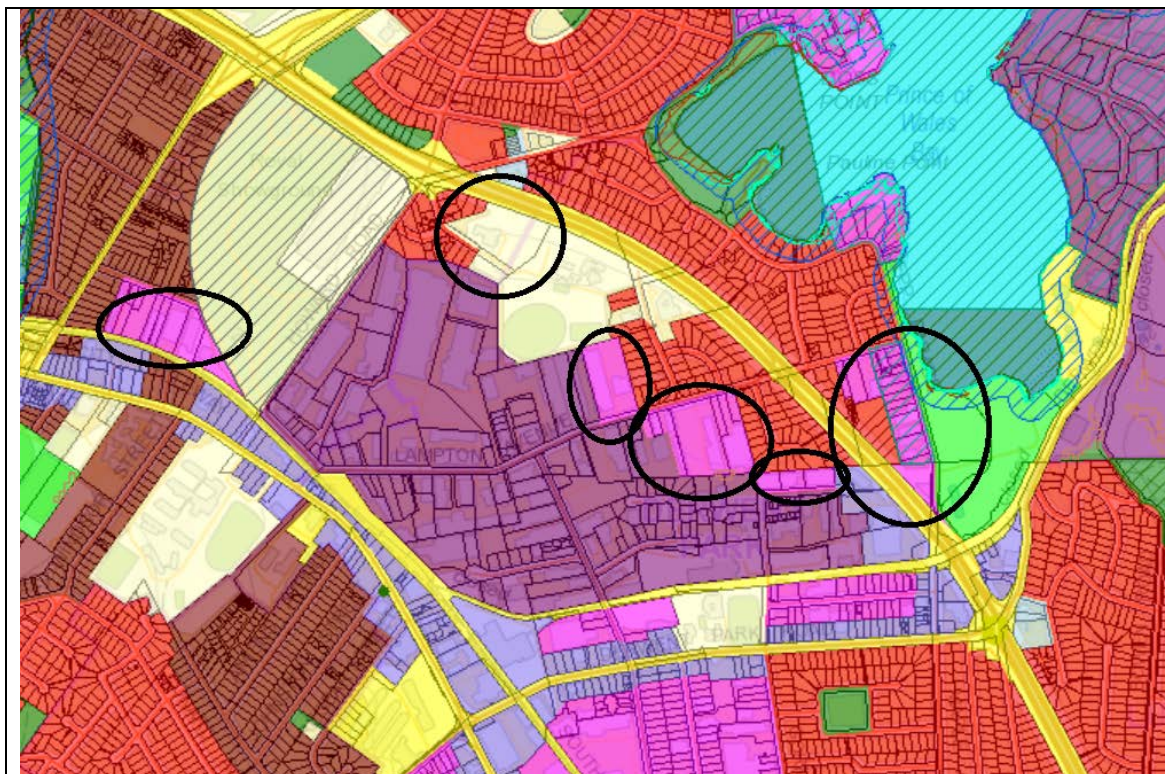


Figure 5 – pattern of application of Light Industrial zoning between General Industrial and General Residential area.

Light Industrial zoning would ensure an appropriate transition from the General Industrial land to the south/rear to the General Residential zoning to the west. This zoning is also logical given the close proximity to the Brooker Highway as a Major transport route.

The zoning would prevent the establishment of sensitive uses that would be susceptible to noise impacts from the Highway.

Option 4. General Residential

Zone Application Guidelines

GRZ 1 The General Residential Zone should be applied to the main urban residential areas within each municipal area which:

- (a) are not targeted for higher densities (see Inner Residential Zone); and
- (b) are connected, or intended to be connected, to a reticulated water supply service and reticulated sewerage system.

GRZ 2 The General Residential Zone may be applied to green-field, brown-field or grey-field areas that have been identified for future urban residential use and development if:

<p><i>(a) within the General Residential Zone in an interim planning scheme;</i></p> <p><i>(b) within an equivalent zone under a section 29 planning scheme; or</i></p> <p><i>(c) justified in accordance with the relevant regional land use strategy, or supported by more detailed local strategic analysis consistent with the relevant regional land use strategy and endorsed by the relevant council; and</i></p> <p><i>(d) is currently connected, or the intention is for the future lots to be connected, to a reticulated water supply service and a reticulated sewerage system,</i></p> <p><i>Note: The Future Urban Zone may be used for future urban land for residential use and development where the intention is to prepare detailed structure/precinct plans to guide future development.</i></p> <p><i>GRZ 3 The General Residential Zone should not be applied to land that is highly constrained by hazards, natural values (i.e. threatened vegetation communities) or other impediments to developing the land consistent with the zone purpose of the General Residential Zone, except where those issues have been taken into account and appropriate management put into place during the rezoning process.</i></p>
<p>Comment on suitability</p>
<p>Extending the General Residential zone to cover the site is a viable option but not preferred given the potential for amenity impacts from the General Industrial land to the rear and traffic noise from the Highway.</p>

<p>Option 5. Commercial Zone</p>
<p>Zone Application Guidelines</p>
<p><i>CZ 1 The Commercial Zone should be applied to land within urban settlements that provides, or is intended to provide, for large floor area retailing (such as Bulky Goods Sales and Equipment and Machinery Sales and Service), service industry, low impact storage and warehousing, or other commercial use needs of the community that demand:</i></p> <p><i>(a) large floor or outdoor areas; and</i></p> <p><i>(b) high levels of vehicle access and car parking for customers.</i></p> <p><i>CZ 2 The spatial application of the Commercial Zone must ensure that it does not compromise the viability of the other retail and business centres located within the three business zones.</i></p> <p><i>CZ 3 The Commercial Zone should not be applied to land:</i></p> <p><i>(a) where the primary purpose is to provide for industrial purposes (see industrial zones);</i></p>

<p>or</p> <p><i>(b) where the primary purpose is to provide for General Retail and Hire uses such as supermarkets, department stores or other variety stores (see business zones).</i></p>
<p>Comment on Suitability</p>
<p>The circumstances of this site with highway visibility and convenient access to the Brooker Highway via Howard Road are well suited to large floor area or outdoor display area uses that would require high levels of vehicle access and carparking for customers.</p> <p>A Traffic Impact Assessment prepared by Milan Prodanovic provided as Appendix A to this representation confirms that the expected traffic of such use and development can safely be accessed from Howard Road.</p> <p>Given the Showgrounds SAP and associated nearby Bunnings site, Commercial Zoning would in effect not be an isolated area of commercial use.</p> <p>Commercial zoning would be consistent with the established pattern of commercial use at the intersection of the Brooker Highway and Derwent Park Road and the Showgrounds site.</p>

<p>Option 6. Urban Mixed Use Zone</p>
<p>Zone Application Guidelines</p>
<p><i>UMUZ 1 The Urban Mixed Use Zone should be applied to land within urban settlements:</i></p> <p><i>(a) which have an existing mix of uses, where no particular use dominates, and there is a strategic intention to maintain a mix of uses; or</i></p> <p><i>(b) where there is a strategic intention to create an area with a mix of uses where no particular use dominates.</i></p> <p><i>UMUZ 2 The Urban Mixed Use Zone may be applied to urban areas:</i></p> <p><i>(a) along high frequency public transport corridors or key transport hubs such as bus interchanges; or</i></p> <p><i>(b) areas intended for commercial, retail and residential activity with good access to high frequency public transport services.</i></p> <p><i>UMUZ 3 The Urban Mixed Use Zone should not be applied to:</i></p> <p><i>(a) commercial strips where commercial and retail activity is intended as the dominant activity (see business zones);</i></p> <p><i>(b) residential areas where residential use is intended as the dominant use (see residential zones); or</i></p> <p><i>(c) smaller rural settlements (see Village Zone).</i></p>

Comment on suitability
The circumstances of the site align in part to those in Guideline UMUZ 1a) for the application of the Urban Mixed Use Zone in that there is an existing mix of use around the junction of Howard Road and the Highway. This zoning however may be difficult to justify in the absence of a strategic review and intention for mixed use of all the land in the vicinity of Howard Road and the Brooker Highway junction.

Option 7. Local Business Zone
Zone Application Guidelines
<p><i>LBZ 1 The Local Business Zone should be applied to land within urban settlements which provides, or is intended to provide, for the business, commercial and community functions within:</i></p> <p><i>(a) local shopping strips; or</i></p> <p><i>(b) town centres for some smaller settlements.</i></p> <p><i>LBZ 2 The Local Business Zone may be applied to:</i></p> <p><i>(a) Local Centres and the lower order Minor or Neighbourhood Centres in the Activity Centre Network under the Southern Tasmania Regional Land Use Strategy;</i></p> <p><i>(b) Local or Minor Centres and the Neighbourhood or Rural Town Centres in the Regional Activity Centre Hierarchy under the Regional Land Use Strategy of Northern Tasmania; and</i></p> <p><i>(c) the main retail and business areas of Local Service Centres and Localities in the activity centres description in the Cradle Coast Regional Land Use Strategy.</i></p> <p><i>LBZ 3 The Local Business Zone may be used for groups of local shops and businesses in existing residential areas where there is a strategic intention to maintain such uses, and the provisions of the surrounding residential zone are not appropriate.</i></p> <p><i>LBZ 4 The Local Business Zone should not be used for individual, isolated local shops or businesses within residential areas, unless:</i></p> <p><i>(a) they are a use, or are of a scale, that is more appropriate for the Local Business Zone and there is an intention to maintain the use; or</i></p> <p><i>(b) there is a strategic intention to expand the existing retail or business area in this locality consistent with the relevant regional land use strategy, or supported by more detailed local strategic analysis consistent with the relevant regional land use strategy and endorsed by the relevant council.</i></p>
Comment on suitability

Despite this zone being applied to two properties in the surrounding area on the opposite side of Brooker Highway, the circumstance do not obviously align with the zone application guidance.

3. Requested Zoning

Having regard to considerations in Section 2 above it is requested that the Brooker Highway frontage of the site be zoned Commercial and southern part zoned Light Industrial as shown in Figure 6 below.

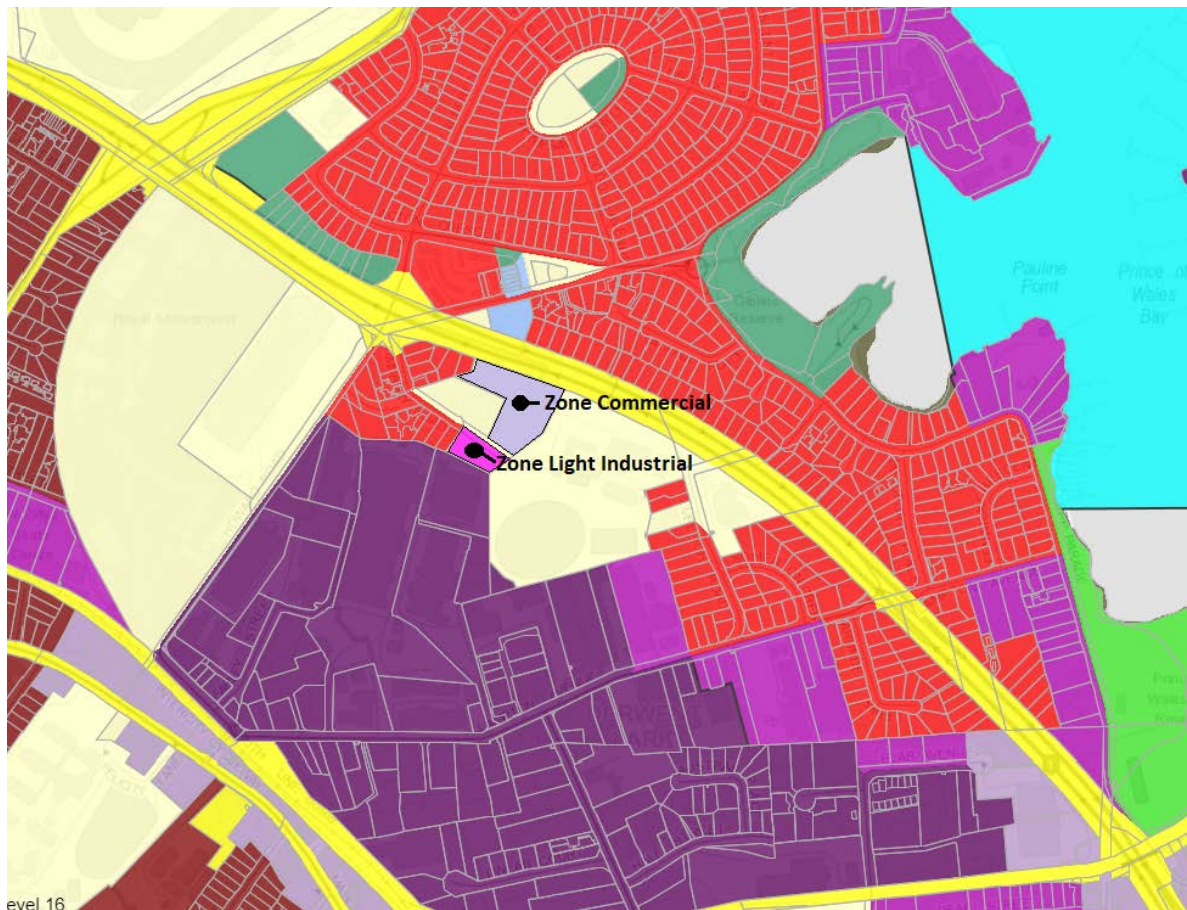


Figure 6 - Requested LPS Zoning

4. Summary


The proposed Community Purpose Zoning of 11 Timsbury Road under the Draft Glenorchy LPS is not supported.

Having regard to the above in my opinion application of the Light Industrial Zone over the southern part and Commercial of the northern part fronting Brooker Highway would be logical in that:

- It would be consistent with the existing pattern of zoning in the Derwent Park area where Light Industrial Zoning is applied at the transition from General Industrial areas;
- Light Industrial zoning would ensure an appropriate transition from the General Industrial land to the south/rear to the General Residential zoning to the west;
- The proposed Commercial zoning of the part of the site fronting Brooker Highway aligns with the nearby Bunnings site and Showgrounds SAP applied in the vicinity as well as the other existing Commercial zoned areas on Brooker Highway in the vicinity of the intersection with Derwent Park Road;
- The zoning is logical given the close proximity to the Brooker Highway as a major transport route;
- The zoning would prevent the establishment of sensitive uses that would be susceptible to noise impacts from the Highway; and
- A Traffic Impact Assessment prepared by Milan Prodanovic is provided as Appendix A and confirms that the expected use and development under the requested Light Industrial and Commercial Zoning could be safely accommodated at the intersection with Howard and Timsbury Roads.

I would welcome the opportunity to discuss further as necessary and can be contacted on 0400109582.

Yours sincerely



Frazer Read
Principal
All Urban Planning Pty Ltd

Appendix A
Traffic Impact Assessment



MILAN PRODANOVIC B.E. PEng
TRAFFIC ENGINEERING & ROAD SAFETY

TRAFFIC IMPACT ASSESSMENT

**PROPOSED
LAND USE REZONING**

**9 TIMSBURY ROAD
GLENORCHY**

MAY 2020

TRAFFIC IMPACT ASSESSMENT

PROPOSED LAND USE REZONING

9 TIMSBURY ROAD GLENORCHY

MAY 2020

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REFERENCES:

- AUSTROADS – Guide to Road Safety Part 6: Road Safety Audit (2009)
- Road Traffic Authority NSW – Guide to Traffic Generating Developments, 2002
- Road and Maritime Services (Transport) - Guide to Traffic Generating Developments; Updated traffic surveys (August 2013)
- AUSTROADS – Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings (2019)
- AUSTROADS – Guide to Traffic Management Part 12: Traffic Impacts of Developments (2019)
- Department of State Growth publication: *A Framework for Undertaking Traffic Impact Assessments* (2007)
- Glenorchy Interim Planning Scheme 2015

1. INTRODUCTION

The owner of land at 9 Timsbury Road in Glenorchy proposes to request a rezoning of the land to allow for light industrial and commercial development.

The Traffic Impact Assessment report has been prepared in support of the proposed rezoning application. It outlines the existing road and traffic characteristics along Timsbury Road to Howard Road in the area of the development site, considers the traffic activity that development on the rezoned land could generate and the effect that this traffic will have on Timsbury Road as well as the Howard Road/Timsbury Road intersection.

The TIA report is based on the Department of State Growth (DSG) Traffic Impact Assessment Guidelines with regard also given to Austroads: Guide to Traffic Management Part 12.

The techniques used in the investigation and assessment incorporate best practice road safety and traffic management principles.

2. SITE DESCRIPTION

The location of the site which is proposed for rezoning lies at the eastern end of Timsbury Road; the public road ends at the eastern boundary of the land (development site).

Existing development along Timsbury Road is predominantly residential for the first half of the road, then residential along the southern side and community purpose use on the northern side, with Timsbury Road ending within land zoned community purpose use on both sides of the road.

The land immediately to the south of the development site under consideration is zoned 'General Industrial', while the Brooker Highway lies along the northern boundary.

The location of the site that is proposed for rezoning is shown on an extract of the area map for this area, seen in Figure 2.1.

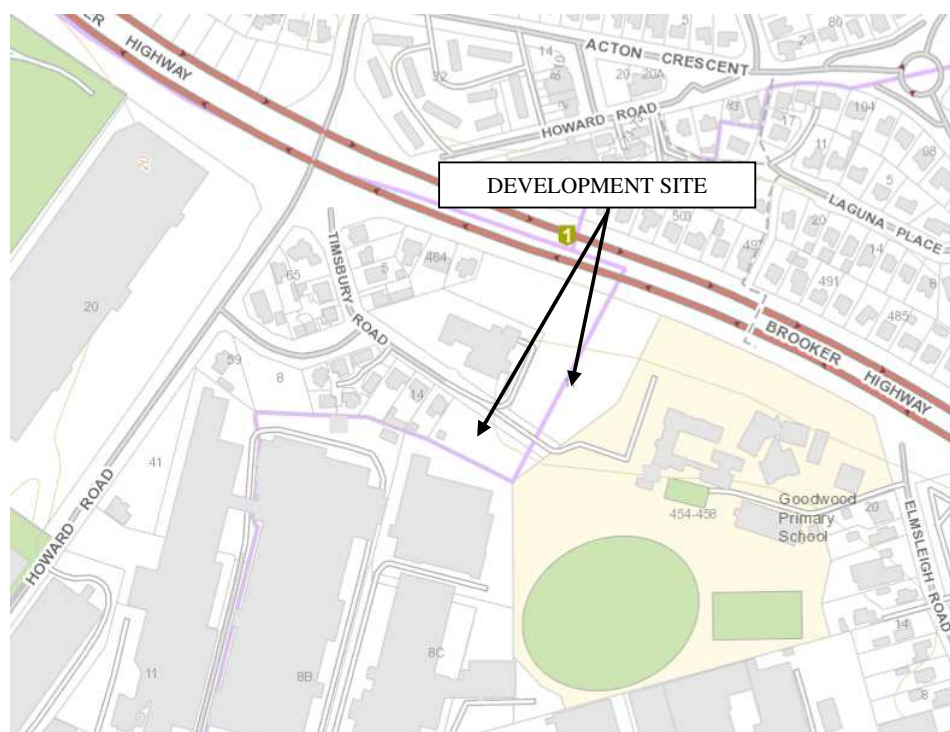


Figure 2.1: Extract of area map showing location of proposed development site

3. DEVELOPMENT PROPOSAL

The development site under consideration consists of two parcels of land separated by a public road. The land for the road was acquired to provide public road access to the Professional Learning Institute development at the eastern end of this section of the road.

The area of the land on the southern side of the road is 2,300m² and on the northern side of the road is 9,550m².

It is proposed the land on the southern side of the road be rezoned from Community Purpose to 'Light Industrial' and on the northern side of the road from Community Purpose to 'Commercial'.

A view of the land in question is seen in Photograph 3.1. The photograph shows the road through the site with land on the right to be zoned light industrial and on the left, beyond and behind the shed, to be zoned commercial.



Photograph 3.1: View to east along Timsbury Road with proposed land to be rezoned along both sides of the road

4. EXISTING ROAD AND TRAFFIC ENVIRONMENT

4.1 Road Characteristics

Timsbury Road provides all vehicle access road to and from the development site through its fairly new link to Howard Road.

The main access driveway to the Bunnings development is located directly opposite Timsbury Road to form a four leg intersection on Howard Road.

There is a give way sign and holding line on Timsbury Road at the intersection with Howard Road.

Views of the Timsbury Road and Bunnings access approaches to Howard Road are seen in Photographs 4.1 and 4.2.

The initial section of Timsbury Road off Howard Road has a width between kerb lines of 8.9m.

There is a give way sign and holding line at the junction of the new section of Timsbury Road with the old Timsbury Road, as seen in Photograph 4.3.

The older section of Timsbury Road, leading to the development site has a width between kerb faces of 7.5m with a 1.5m wide footpath along each side, as seen in Photograph 4.4.



Photograph 4.1: View to west along Timsbury Road towards Howard Road and access to Bunnings (opposite)



Photograph 4.2: View to east along Bunnings access towards Howard Road and Timsbury Road junction



Photograph 4.3: View to north along newer section of Timsbury Road at junction with older section of Timsbury Road



Photograph 4.4: View to west along older section of Timsbury Road from development site

4.2 Traffic Activity

Traffic volume data has been received from the Glenorchy City Council from an automatic counter survey undertaken on Howard Road in May 2017 between Bunnings and the Showground entrance. The recorded traffic volumes for the average weekday traffic at the survey site on Howard Road were as follows:

Average Weekday Traffic	-	6,893 vehicles/day
Morning Peak Hour Traffic (8am-9am)	-	196 vehicles/hour to north
	-	296 vehicles/hour to south
Afternoon Peak Hour Traffic (4pm-5pm)	-	431 vehicles/hour to north
	-	211 vehicles/hour to south

The hourly directional and two-way traffic distribution for the average weekday at this site have been presented graphically in Figure 4.1.

The daily traffic volumes on weekends were around 84% and 76% that of the average weekday.

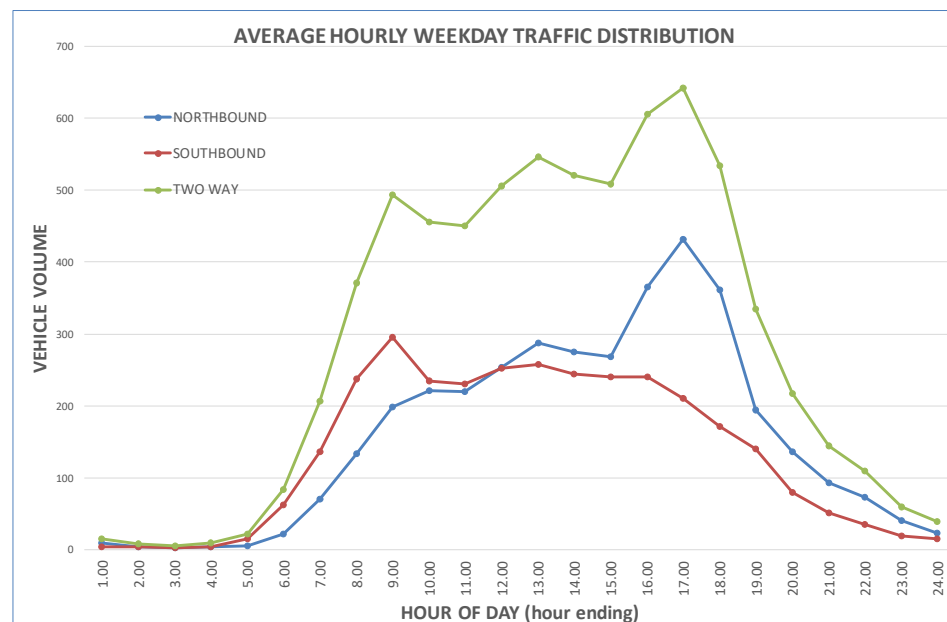


Figure 4.1: Average hourly weekday traffic distribution on Howard Road

In order to have knowledge of the traffic activity at the Howard Road/Timsbury Road/Bunnings access intersection, a turning traffic volume survey was undertaken at the intersection during the 4:00pm – 5:00pm period on Monday 24 March 2020. The results from these surveys have been summarised in Figure 4.2.

Only the afternoon peak hour was surveyed due the much higher passing traffic volume along Howard Road in the afternoon compared with the morning period, as seen in Figure 4.1.

This turning movement survey has found a higher northbound traffic volume on Howard Road compared with that recorded by council three years earlier.

The survey also recorded 35 vehicles/hour entering and leaving Timsbury Road to/from Howard Road during this afternoon peak hour.

As comparison, similar turning movement surveys on 8 June 2016 found 29 vehicles/hour during the 8:00am – 9:00am period and 72 vehicles/hour during the 3:00pm – 4:00pm period entering and leaving Timsbury Road. The current and past higher traffic volumes along Timsbury Road are mostly due to the Professional Learning Institute development at the eastern end of Timsbury Road.

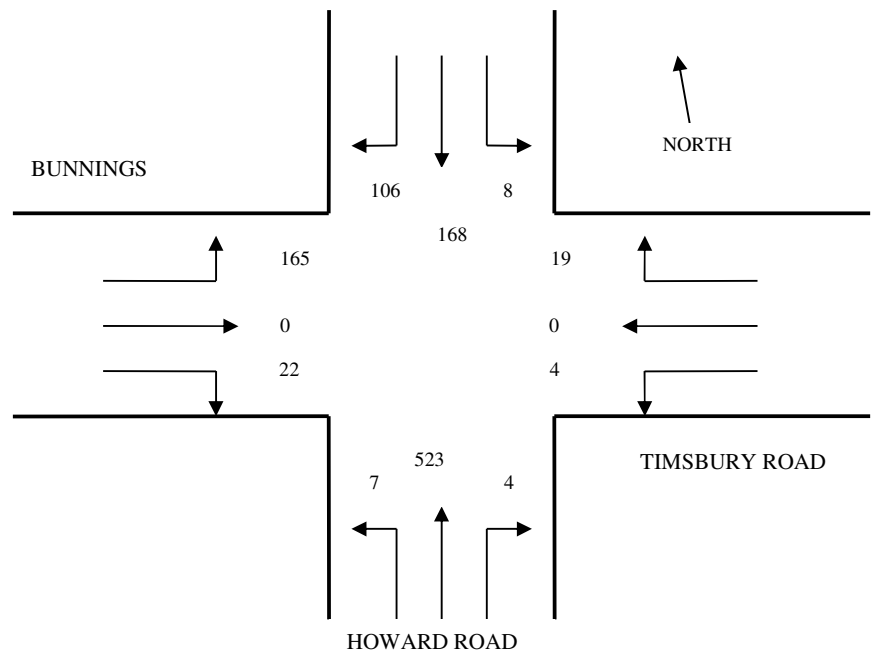


Figure 4.2: Turning traffic volumes at intersection of Howard Road/ Timsbury Road/Bunnings access – 4:00 to 5:00pm

5. TRAFFIC GENERATION BY THE DEVELOPMENT

As outlined in Section 3 of this report the development proposal is for the rezoning of the property at 9 Timsbury Road. It is proposed one parcel of land will be rezoned to light industrial use and the other to commercial use.

The land proposed as light industrial use has an area of 2,300m² and land proposed as commercial use has an area of 9,550m².

It is not known what use types of businesses will be developed on the two parcels of land in the future.

In order to determine what the maximum traffic activity in this area could be in the future as a result of development on the two parcels of land, guidance is often sought from the New South Wales, Road Traffic Authority document – Guide to Traffic Generating Developments.

Light industrial site

The Guide indicates that when strategic planning is being undertaken for large industrial estates, an indicative figure of 28 employees per developed hectare could be assumed. The site location also can affect the transport mode of employees. The mean figures found in 1978 RTA surveys were 86% car users, with an average car occupancy of 1.26. This indicates an overall figure of 68% as car drivers.

With the total area of the development site being 0.23ha, based on the above figures in the RTA Guide, the potential traffic that the development on the site could generate is some 50 vehicles/day and up to 5 vehicles/hour during peak traffic period, assuming 10% of the daily traffic occurs during peak hour periods.

As the area of the proposed light industrial site is small and traffic generation rate is typically higher for smaller sites, it will be assumed the traffic generation will be twice this volume, i.e. 100 vehicles/day and 10 vehicles/hour.

Commercial site

The commercial site has an area of 9,550m².

After weighing up the likely footprint of buildings, required site area for parking, and areas for setbacks, it is considered that potential development on the site could be as follows:

- Building floor area = 4,000m²;
- Area lost to boundary setbacks, etc = 3,000m²;
- Area for car parking = 2,500m².

The use activities that are allowed in a commercial zone are varied. It can include uses such as bulky goods, office/business, and food service, as well as a number of discretionary uses.

The traffic generation per 100m² of floor area will vary for the use activity. As example, for a bulky good development it is around 3 vehicles/100m²/hr and 17 vehicles/100m²/day, for an office/commercial development it is 2 vehicles/100m²/hr and 10 vehicles/100m²/day. There are other discretionary land uses which would generate only 1 vehicles/100m²/hr and 10 vehicles/100m²/day.

Assuming a mix of uses in this range and applying the rate of 2.5 vehicles/100m²/hr and 14 vehicles/100m²/day to an assumed floor area of 4,000m², the traffic generation will be around 100 vehicles/hour and 560 vehicles/day.

Total traffic generation

The above assumptions regarding the possible development on the two parcels of land have lead to the conclusion that the expected total traffic generation will be around 660 vehicles/day and around 110 vehicles/hour during the peak traffic period.

Parking supply in commercial zone

The possible use activities in this zone will require a parking supply of 1 car parking per 30-50m² of floor area. There are other possible uses that would require a lesser parking rate.

Applying the average in this range (1space/50m²) to the assumed floor area of 4,000m², the required parking supply would be 80 cars parking spaces.

In any car parking area which includes the bays, parking aisles and circulation roads, the average area per parking bay is around 30m².

The total area of the car park with the above estimated parking supply of 80 car parking spaces, would be 2,400m², which is what has been assumed for the commercial zone.

6. TRAFFIC ASSESSMENT AND IMPACT

This section of the report considers the impact of the traffic on the local road network that development on the two rezoned parcels of land is likely to generate.

6.1 Operational Impact of Increased Traffic Activity

The analysis in Section 5 of this report has estimated development on the rezoned land can reasonably be expected to generate around 660 vehicles/hour and around 110 vehicles/hour during the peak traffic periods.

Observation of traffic behaviour at the intersection of Howard Road/Timsbury Road/Bunnings access during the afternoon peak hour did not find any capacity issues other than brief periods when the queue extended along Howard Road southwards from the Brooker Highway across the Timsbury Road intersection.

A SIDRA analysis of the intersection has been undertaken using the recorded traffic volumes during the afternoon peak hour turning movement survey with the addition of the 110 vehicles/hour to and from Timsbury Road as well as an additional 200 vehicles/hour along Howard Road, to allow for the approved development on the Showground land to the south of Bunnings.

The intersection traffic volumes used in the SIDRA analysis is seen in Figure 6.1. The SIDRA analysis has found there will be no operational issues at the intersection with all this additional traffic.

A summary of the main outputs from the SIDRA analysis is provided in Table 6.1.

If the traffic along Howard Road was to increase a further 1% p.a. over the next 10 years, there will still be no major operational issues at the intersection.

The right turn movement from Timsbury Road would operate a Level of Service D and any occasional through vehicle movement across Howard Road will be at level of Service E. Such movements would be exceedingly rare; none were recorded during the afternoon peak hour survey in March 2020.

Furthermore, even with this additional traffic along Howard Road, the approach traffic movements from the Timsbury Road and Bunnings will still operate at Level of Service C.

It is not necessary to consider the morning peak hour traffic conflict at the intersection as the through traffic volume on Howard Road is significantly less than the afternoon peak hour as is traffic generated by existing and proposed development in the surrounding area.

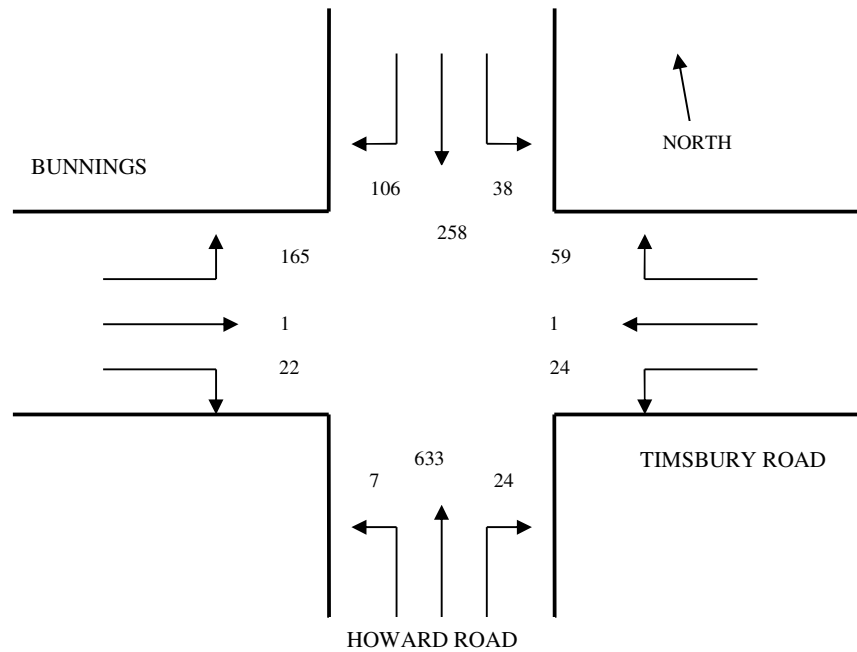


Figure 6.1: Turning traffic volumes at intersection of Howard Road/ Timsbury Road/Bunnings access – 4:00 to 5:00pm

TIME OF DAY/ SITUATION	APPROACH	WORST LEVEL OF SERVICE	DEGREE OF SAT	95%ILE QUEUE LENGTH (m)	HIGHEST DELAY (sec)
HOWARD RD/ TIMSBURY RD PM PEAK HOUR 2030 TRAFFIC	Howard Rd - north	A	0.43	1	5.5
	Timsbury Rd	B-D	0.34	9	28.3
	Howard Rd - south	A	0.20	4	8.9
	Bunnings	B-D	0.38	12	28.9

Table 6.1: Outputs from SIDRA analysis for Howard Road/Timsbury Road intersection – 2030 traffic volumes

6.2 Other traffic management and operational issues

The one other matter to be addressed with the proposed land use rezoning proposal is the impact that the additional traffic will have along Timsbury Road.

It has been determined possible development on the two rezoned parcels of land can be expected to generate around 650 vehicles/day.

Based on past traffic surveys and observations in this area, as well as an estimate of expected traffic generation by the dwellings in the street, the current development along Timsbury Road would generate around 450 vehicles/day at the Howard Road intersection.

With the additional future traffic from proposed development site, the total future traffic volume on Timsbury Road has been estimated at 1,100 vehicles/day.

This traffic volume will not create any operational issues along Timsbury Road.

With existing residential development along the initial sections of Timsbury Road, it is relevant to consider the impact of the traffic on the amenity of residents.

Residential amenity is an important consideration in the management of local streets. A reduction in the residential amenity is necessarily caused by high traffic volumes, excessive speed, and inappropriate types of vehicles in the street.

Such traffic problems cannot always be measured. In some cases, residents are simply annoyed by what they perceive as too many cars in their street. They may not be bothered by any specific characteristics of this traffic, but generally feel that it is invading their territory and intruding on their privacy.

Road hierarchy definitions clearly indicate the limits that should apply to vehicle speeds and traffic volumes for the lower classes of a street network.

A commonly accepted value for the 'environmental capacity' of any residential street has been 2,000 -3,000 vehicles per day with pedestrians beginning to experience road crossing issues at volumes of around 2,500 vehicles/day.

Furthermore, a desirable maximum traffic volume for a local residential street is around 1,000 vehicles/day.

The traffic volume along Timsbury Road of around 1,100 vehicles/day is well below the above maximum environmental capacity of a residential street, and around the desirable maximum for a local residential street.

Development on the rezoned land is also expected to generate some commercial traffic. These would be up to the size medium rigid trucks (similar to garbage trucks).

The width of Timsbury Road is quite sufficient to accommodate the additional traffic.

It is concluded the future traffic volumes along Timsbury Road will not create a significantly increased amenity impact or result in any operational difficulties beyond what is reasonably acceptable.

7. SUMMARY AND RECOMMENDATIONS

This Traffic Impact Assessment has been prepared to address possible traffic impacts from the rezoning of 9 Timsbury Road to allow light industrial and commercial development.

The land proposed as light industrial use has an area of 2,300m² and land proposed as commercial use has an area of 9,550m².

Based on a number of assumptions regarding the possible development on the two parcels of land, it has been estimated the traffic generation will be around 660 vehicles/day and around 110 vehicles/hour during the peak traffic period.

In order to assess the impact of this traffic on the Howard Road/Timsbury Road/Bunnings access intersection, a SIDRA analysis has been undertaken using the recorded traffic volumes at this intersection during the recent turning movement survey during the afternoon peak hour, with the addition of the 110 vehicles/hour to and from Timsbury Road as well as a further 200 vehicles/hour along Howard Road, to allow for the approved development on the Showground land to the south of Bunnings.

This analysis has found there will be no operational issues at the intersection in the future with this additional traffic. If the traffic along Howard Road was to increase a further 1% p.a. over the next 10 years, there will still be no major operational issues at the intersection.

The through traffic volume on Howard Road is significantly less than the afternoon peak hour, as is traffic generated by existing and proposed development in the surrounding area. Therefore, it is not necessary to also consider the morning peak hour traffic conflict at the intersection.

The total future traffic volume on Timsbury Road has been estimated at 1,100 vehicles/day. This traffic volume will not create any operational issues along Timsbury Road.

The future traffic volume along Timsbury Road will be well below the maximum environmental capacity for a residential street, and around the desirable maximum for a local residential street.

It is concluded the future traffic volumes along Timsbury Road will not create a significantly increased amenity impact or result in any operational difficulties beyond what is reasonably acceptable.